

REMARKS

Reconsideration of this application is respectfully requested. Claims 1, 2, 6 and 21 are amended herewith. Claim 5 is canceled. Claims 1-4 and 6-56 are pending and under consideration. No new matter has been added by way of this amendment.

Rejections under 35 U.S.C. § 102

Claims 1-4, 9, 21, 25, 28-32, 45-47, 49-51, and 54-56 stand rejected as anticipated by U.S. Patent No. 6,110,253 ("Kohr") as discussed in the Official Action dated Jan. 17, 2008. Applicants respectfully traverse. Claim 1 has been amended to recite that controlling an irrigation rate of a heap as a function of a determination of advection at least at one predetermined point in the heap at or below the heap surface. Claims 2-4, 9, 21, 25, 28-32, 45-47, 49-51, and 54-56 each depend directly or indirectly from claim 1 and thus contain this limitation. Kohr does not disclose this step. Therefore, Kohr does not anticipate the present claims. Thus, Applicants respectfully request that this rejection be withdrawn.

Claims 1, 2, and 13-15 stand rejected anticipated by U.S. Patent No. 6,736,877 ("Harlamovs") as discussed in the Official Action dated Jan. 17, 2008. Applicants respectfully traverse. As discussed above, claim 1 has been amended to recite that controlling an irrigation rate of a heap occurs as a function of a determination of advection at least at one predetermined point in the heap at or below the heap surface. Harlamovs does not disclose this step. Therefore, Harlamovs does not anticipate the present claims. Thus, Applicants respectfully request that this rejection be withdrawn.

Rejections under 35 U.S.C. § 103

The Examiner has made several obviousness rejections, as summarized below. Each of these rejections was first described in the Action dated January 18, 2008.

Claims 16 and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Harlamovs as applied to claims 1, 13-15, and 17-19.

Claims 10-12 and 22-24 stand rejected as allegedly obvious over Kohr as applied to claims 1, 9, and 22.

Claims 26 and 27 stand rejected as allegedly obvious over Kohr as applied to claim 1, further in view of U.S. Patent No. 6,860,919 ("Norton").

Claims 33-40, 41-44, 48, 52, and 53 stand rejected as allegedly obvious over Kohr as applied to claim 1, further in view of MacLeod et al., *Applied Environmental Microbiology*, or further in view of MacLeod and U.S. Patent No. 6,435,769 ("Harrington").

Applicants respectfully traverse these rejections. Claim 1 has been amended to recite that controlling an irrigation rate of a heap as a function of a determination of advection at least at one predetermined point in the heap occurs at or below the heap surface. None of the cited references, including Harlamovs, Kohr, Norton, MacLeod, or Harrington provide for controlling an irrigation rate of a heap as a function of a determination of advection at least at one predetermined point in the heap at or below the heap surface. Thus, the cited references do not recite each of the features set forth in these claims. Further, it would not have been obvious to one of ordinary skill in the art to modify either Harlamovs or Kohr such that advection would be determined at a predetermined point in the heap at or below the heap surface. Thus, Applicants respectfully request that each of these rejections be withdrawn.

Double Patenting Rejection

Claims 1 and 33-39 are provisionally rejected for obviousness-type double patenting over claims 1-19 of U.S. Application No. 10/528,381 ("the '381 application"). The Examiner states that although the conflicting claims are not identical, they are also not patentably distinct.

Applicants respectfully traverse this rejection. Claims 33-39 provide a method of introduction of microorganisms in a heap of materials and then controlling the heap leach process according to claim 1 where the determination of advection at least at one predetermined point in the heap occurs at or below the heap surface. In contrast, claims 1 – 19 of the '381 application recite a method of introducing microorganisms into a heap of material for bioassisted

heap leaching. These claims do not teach or suggest determining advection at least at one predetermined point in the heap at or below the heap surface. Thus, claims 1 and 33-39 as presently pending are neither anticipated by nor obvious over the '381 application. Thus, Applicants respectfully request that this obviousness-type double patenting rejection be withdrawn.

Conclusion

In view of the foregoing remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed.

If there are any other issues remaining that the Examiner believes can be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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